Parkland College

Biology Courses | Natural Sciences Courses

2015

Biology 123 Microbiology Fall 2015

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MICROBIOLOGY: A COURSE OVERVIEW

Fall 2015

Welcome to Microbiology! We look forward to a fun and productive semester. Please keep this copy of the syllabus handy throughout the semester. It includes information on due dates, deadlines, point values, and our expectations and policies. Remember that our staff is always available to help ensure your success in this course.

Biology 123 – Microbiology is a transfer level survey course designed to examine a broad spectrum of the microbial world. Special attention is given to the study of bacteria and viruses with emphasis given to structure, physiological processes, physical and chemical control, immune mechanisms, disease processes and practical applications. Required laboratory exercises stress basic techniques for handling, examining, and identifying microbial specimens.

INSTRUCTORS:	Vikki Crnekovic	L 233	373.3731	vcrnekovic@parkland.edu
	Tiffany Gibson	L 240	351.2285	tgibson@parkland.edu
	Jennifer Joesting	L 240	351.2285	jjoesting@parkland.edu

TEXTBOOK: Microbiology with Diseases by Body System; Robert W. Bauman; Pearson/Benjamin Cummings; San Francisco, CA 2014, 4th Edition

LAB MANUAL: Techniques in Microbiology: A Student Handbook; Custom Edition for Parkland College; Pearson/Benjamin Cummings; San Francisco, CA 2007

OBJECTIVE MANUAL: Stipes Publishing

SAFETY GOGGLES: **Required by ALL** students, may be purchased at a nominal fee at the Parkland College Bookstore.

TESTS:

A. **Type of Tests:**

Lecture materials will be evaluated using a series of objective quizzes.

Laboratory exercises are evaluated using a series of practical examinations and a separate laboratory write- up for each exercise. In addition, each laboratory will include a short quiz on Cobra.

A synthesis examination (Final) is required and is given **only** during the final examination period.

B. **Grading Criteria:**

Module C-1 through C-14 Written Examinations	275
Synthesis Examination (Final)	75
Lab Practical 1 (Morphological Unknown)	20
Lab Practical 2 (Eucaryotic Microorganisms)	20
Lab Practical 3 (Biochemical Unknown)	30
Written Laboratory Exercises	150
Laboratory Quizzes	70
TOTAL POINTS	**640**

C. **Grading Standards:**

A	=	567	-	630
B	=	504	-	566
C	=	441	-	503
D	=	378	-	440
F	=	BELOW		377

TESTING CENTER HOURS:

To Be Announced

HOMEWORK / READING ASSIGNMENTS:

The lecture portion of Biology 123 – Microbiology is divided into fourteen (14) modules. You will receive objectives for each module. Past history shows us that a student should expect to spend 3 -5 hours per week outside the class preparing course materials. This estimate varies greatly with the individual student.

ATTENDANCE and ABSENCES:

Lecture:
Students are expected to attend all lecture sessions of the class. You will be held responsible for all information given during lecture. If you miss a session, please call your instructor for an excused absence, otherwise you will not be given a quiz extension. **CELL PHONES AND TEXTING ARE NOT ALLOWED IN LECTURE OR LAB.**

Lab:
All laboratory sessions are required. Cultures are issued, directions given, and discussions of previous laboratories are included in these sessions. The time will vary greatly from week to week.

If you are unable to attend a laboratory session, you must phone or email and leave a message for your instructor so that cultures and other material will be saved for you. Lab make-ups will be allowed only with documentation of an emergency or illness. IF UNEXCUSED, NO MAKEUPS WILL BE ALLOWED!

All laboratory and lecture assignments missed during periods of absence must be made up within a one-week period following your return to class. Tardiness beyond 5 minutes will result in loss of participation in lab and A MAKEUP WILL NOT BE ALLOWED!

A penalty of one point per day will be assessed for late laboratory assignments.

LABORATORY WARNING:

A small number of laboratory tests performed in Biology 123 use chemicals which if handled carelessly are potentially harmful to pregnant women. If you are pregnant or become pregnant during the semester in which you are taking Microbiology, notify your laboratory instructor immediately. The tests will be performed by others and the results given to you.

AMERICAN DISABILITIES ACT:

If you feel you have a disability for which you may need an academic accommodation (e.g. an alternate testing environment, use of assistive technology or other classroom assistance), please contact the **Office of Disability Services at 353-2338, or Room U 260.**

CENTER for ACADEMIC SUCCESS:

If you find yourself needing assistance of any kind to complete assignments, stay on top of readings, study for tests, or just to stay in school, please contact one of the following staff at the Center for Academic Success in **D 120 or at 353-2005 or 351-2441.**

You may also email the CAS at centerforacademicsuccess@parkland.edu

EVALUATION:

All students will be asked to complete an Instructor and Course Evaluation at the completion of BIO 123.

MICROBIOLOGY
Tentative Lecture Syllabus

START	MODULE	TOPIC
08/24	C-1	Introduction – Microscopy
08/31	C-2	Procaryotes, Eucaryotes Growth, Classification
09/07	**LABOR DAY (COLLEGE CLOSED)**	
09/09	C-3	Biochemistry, Metabolism
09/16	C-4	Genetics
09/23	C-5	Viruses
09/30	C-6 C-7	Disinfection, Sterilization Antimicrobial Drugs
10/09	C-8	Host-Microbe Interactions, Epidemiology Immunization
10/16	C-9 (4 hours)	Functional and Dysfunctional Immunity
10/26	C-10	Skin Infections
11/02	C-11	Upper and Lower Respiratory Infections
11/09	C-12 (4 hours)	Oral, Gastrointestinal Tract Infections
11/18	C-13	Urinary, Genital, and Reproductive Infections
11/25	C-14	Nervous System, Circulatory Infection
11/25 – 11/29	**THANKSGIVING VACATION – begins at 5 PM on 11/25**	
12/11	**LAST DAY OF CLASSES**	

MICROBIOLOGY
Tentative Laboratory Syllabus

WEEK OF:	LABORATORY EXERCISE	LAB #
08/24	Isolation of Organisms from the Environment	1
08/31	Broth Culture Agar Slant Culture	2
09/07	**LABOR DAY (COLLEGE CLOSED) – NO LABS THIS WEEK**	
09/14	The Care and Use of the Microscope	3
09/21	Smear Preparation Gram Stain	4
09/28	The Streak Plate Pour Plate	5
10/05	Antibiotic Susceptibility - Testing of Antimicrobial Agents	6
10/12	**PRACTICAL –** Morphological Unknown Eucaryotic Microorganisms – Fungi	7
10/19	Eucaryotic Microorganisms – Parasitology	8
10/26	**EXAM** – Eucaryotic Microorganisms **YES, WE HAVE LAB** Issue Biochemical Unknown	
11/02	Starch Hydrolysis Casein & Gelatin Hydrolysis Hemolysis	9 10 11
11/09	Sugar Tube Fermentation Hydrogen Sulfide Production	12 13
11/16	IMVIC Reactions Eosin Methylene Blue Agar Mannitol Salt Agar	15 17 18
11/23	Nitrate Reduction Urea Hydrolysis Catalase & Oxidase Production	14 16 16
11/25 – 11/29	**THANKSGIVING VACATION – begins at 5 PM on 11/26**	
11/30	Caries Susceptibility Normal Flora of the Human Throat Consultations – Biochemical Unknown	19 20
12/09	Biochemical Unknown Due	

MICROBIOLOGY
Personal Grade Record

QUIZZES

QUIZ	TOTAL POINTS POSSIBLE	SCORE
C1	15	
C2	30	
C3	25	
C4	15	
C5	20	
C6/7	30	
C8	20	
C9	20	
C10	15	
C11	20	
C12	25	
C13	20	
C14	20	
TOTAL	**275**	

LAB PRACTICALS

PRACTICAL	TOTAL POSSIBLE POINTS	MY SCORE
Morphological Unknown	20	
Eukaryotes	20	
Biochemical Unknown	30	
TOTAL	**70**	

LAB REPORTS

LAB	TOTAL POINTS POSSIBLE	MY SCORE
Isolation of Organisms from the Environment	5	
Broth Culture Agar Slant Culture	10	
The Care and use of the Microscopes	10	
Smear Preparation Gram Stain	10	
The Streak Plate and The Pour Plate	10	
Antibiotic Susceptibility – Testing of Antimicrobial Agens	5	
Fungi	5	
Parasitology	10	
Starch Hydrolysis	5	
Casein & Gelatin Hydrolysis	10	
Hemolysis	5	
Sugar Tube Fermentation	10	
Hydrogen Sulfide Production	5	
Nitrate Reduction Catalase & Oxidase Production	15	
IMVIC Reactions	10	
Urea Hydrolysis	5	
Eosin Methylene Blue Agar	5	
Mannitol Salt Agar	5	
Normal Flora of Human Throat	5	
Caries Susceptibility	5	
TOTAL	**150**	

FINAL

TOTAL POSSIBLE POINTS	MY SCORE
75	

MICRO QUIZ DEADLINE

MODULE	1ST TAKE
C1	08/31 – 09/03
C2	09/09 – 09/11
C3	09/16 – 09/18
C4	09/23 – 09/25
C5	09/30 – 10/02
C6/7	10/09 – 10/12
C8	10/16 – 10/19
C9	10/26 – 10/28
C10	11/02 – 11/04
C11	11/09 – 11/11
C12	11/18 – 11/20
C13	11/25 – 11/30
C14	12/04 – 12/07

FINALS

Monday, December 14	6 PM – 8 PM
Tuesday, December 15	11 AM – 1 PM
Wednesday, December 16	8 AM – 10 AM and 2 PM – 4 PM
Thursday, December 17	11 AM – 1 PM

NOTE: All finals will be given in the lab (L 129)